



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/532,396

04/22/2005

Toru Sasaki

SONYJP 3.3-1032

1596

530 7590 04/01/2008
LERNER, DAVID, LITTENBERG,
KRUMHOLZ & MENTLIK
600 SOUTH AVENUE WEST
WESTFIELD, NJ 07090

EXAMINER

LEE, PING

ART UNIT

PAPER NUMBER

2615

MAIL DATE

DELIVERY MODE

04/01/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/532,396	Applicant(s) SASAKI, TORU	
	Examiner Ping Lee	Art Unit 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 11, lines 21-22, the statement "each said projection screen is caused to be flush with each other" is confusing. Since there is only one projection screen being claimed, it would not make sense to claim that the screen being flush with itself. The other thing that is confusing in claim 11 is that the claim implies that each speaker module includes a speaker unit, a cabinet and a projection screen. See the word "and" as specified on line 13. This "and" groups speaker unit, cabinet and the screen together. The other "and" as specified on line 3 groups a frame and a plurality of speaker modules together. In view of the specification and the drawing as originally filed, there is only one screen placed in front of the plurality of speaker modules.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1-7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 3-106298 (hereafter '298) in view of Parker (US 2,632,055).

Regarding claims 1, 2, 7 and 11, patent '298 discloses an array speaker apparatus in Figs.1b and 2. As shown in Fig. 1a, a projection screen (14) is located in front of the array speaker apparatus. Patent '298 discloses the claimed invention with the exception of a (1) frame and (2) a plurality of cabinets within the frame, so each cabinet is substantially enclosed on all but one side.

The second difference would be discussed first. Patent '298 teaches a speaker array with different cabinet design for the speakers in the array. As shown in Fig. 1b, speaker 12b has an open back, while speaker 12a has a closed back (this is the same design as the claimed cabinet). The cabinets as shown in '298 were one type of cabinet design for housing the speakers. One skilled in the art would have recognized that there were several different kinds of cabinet designs available. Parker teaches how to use relative small speakers each enclosed in a small cabinet to provide smooth low frequency response. As shown in Fig. 3 or 4 of Parker, this is a closed-back design to allow the sound to be reproduced in forward direction only. Since Parker's system uses small speakers, the system would fit well with the projection screen in '298. Thus, it would have been obvious to one of ordinary skill in the art to modify '298 by using the speaker cabinet design as taught in Parker in order to improve the low frequency response.

Regarding the frame, the purpose of the frame is to enclose all small cabinets together for easier assembly and additional protection. It does not alter the sound quality generated. Thus, it would have been obvious to one of ordinary skill in the art to

modify patent '298 and Parker by using a frame to enclose all cabinets in order to provide a single piece of device to be coupled with the screen.

Regarding claims 3-6, the claimed buffer materials read on the air between the screen (14) and the opening portion of the cabinets.

5. Claims 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over patent '298 in view of Parker as applied to claim 1 above, and further in view of JP 5-199576 A (hereafter '576).

Regarding claim 8, patent '298 fails to show power amplifiers. However, one skilled in the art would have recognized that the speakers require power amplifiers to generate the drive signal. Patent '298 discloses a speaker layout without providing any accompanying circuitry. One skilled in the art would have expected that any well known speaker driving circuit could be used without generating any unexpected result. Patent '576 teaches such a driving circuit with a power amplifier. Thus, it would have been obvious to one of ordinary skill in the art to modify patent '298 and Parker by utilizing the amplifier as taught in patent '576 in order to drive the speaker properly.

6. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over patent '298 in view of Parker as applied to claims 1 and 6 above, and further in view of JP 5-244550 A (hereafter '550).

Regarding claims 8-10, patent '298 fails to show a directivity formation circuit. Patent '298 discloses speaker layout without providing any accompanying circuitry. One skilled in the art would have expected that any well known speaker driving circuit could be used without generating any unexpected result. Patent '550 teaches such a

driving circuit with power amplifiers and filter circuits. Thus, it would have been obvious to one of ordinary skill in the art to modify patent '298 and Parker by utilizing the driving circuit as taught in patent '550 in order to drive the speaker properly.

Response to Arguments

7. Applicant's arguments with respect to claims 1 and 11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ping Lee whose telephone number is 571-272-7522.

The examiner can normally be reached on Monday, Wednesday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ping Lee/
Ping Lee
Primary Examiner
Art Unit 2615

pwl